

High Energy Physics Government Engagement

Louise Suter, Fermilab
July 20th 2022, Snowmass2022



HEP community government engagement

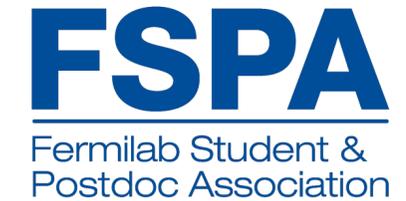
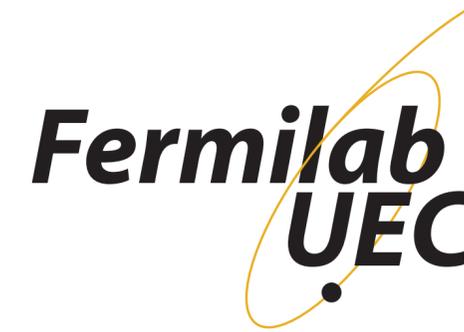
The annual HEP government engagement activities are run through users/community groups

- **UEC** - Fermilab Users Executive Committee
- **SLUO** - SLAC Users Organization
- **USLUA** - US LHC Users Association
- **DPF EC** - APS Division of Parties and Fields EC

Through election, these groups represent a significant fraction of the 6000-strong HEP community, although not all.

A large fraction of the support for the trip comes from the Universities Research Association.

- URA is non-for-profit of over > 90 institutions.



Been running for ~35 yrs

HEP community government engagement

- These groups aim to visit as many Congressional members and relevant staff as possible.
- Nominally a 3-day trip to Washington DC for a group of up to 70 people. 2020, 2021 and 2022 trips were virtual
- For in-person trips, we meet with about 80% of both House and Senate.
- The trip is timed based on when Congress is writing its budget in the form of 'appropriations bills' generally in March/April
 - HEP is funded through the National Science Foundation and the Department of Energy Office of High energy physics
- Attendees are selected by users group: through election, competition, or expertise.



100 senators



435 representatives

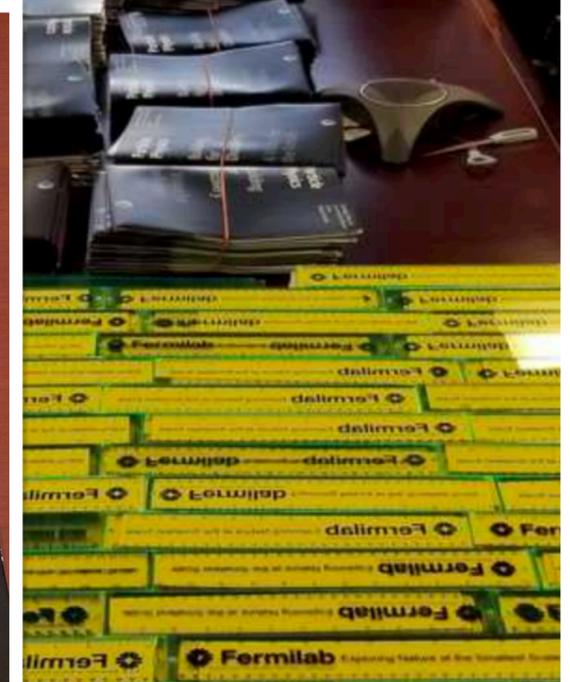
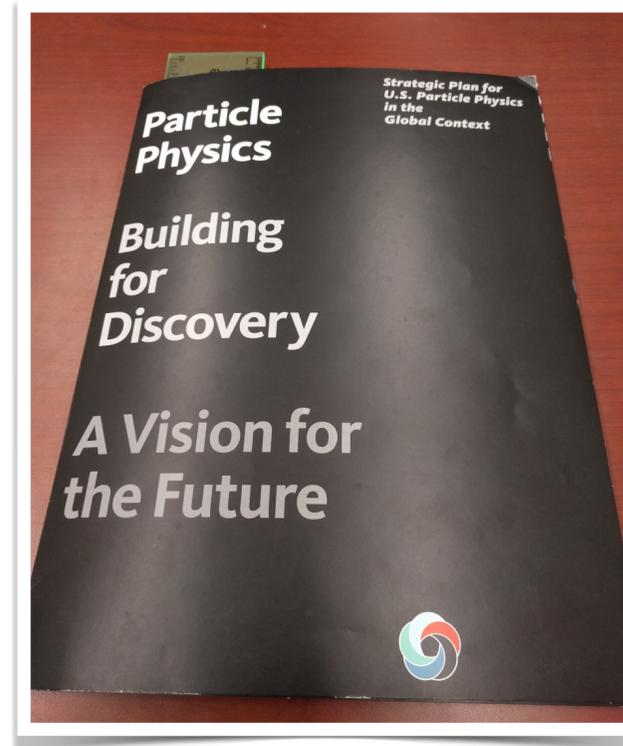




- The trip aims to increase the knowledge and understanding of HEP and basic research within congress and to ask for funding for HEP.
- We share our excitement about our research and put a face to science and the experiments we request funding for.
- The community works to create a coherent message before the trip reflecting the unity of the field around the P5 plan. All trip attendees go with this one cohesive message.
- The message covers the priorities from the P5 plan and our progress toward them.
- We bring a packet of material to support this message and help lead the conversation



- Aim to inform and to make a positive lasting impression. A standard meeting will cover:
 - Who you are, what is high energy physics, and what you are specifically working on
 - Our clear and community-supported plan (P5) and its process
 - The 'Ask', the appropriations request for DOE OHEP and NSF, its justification
 - Point out 'Dear Colleague letters' or policies in support of this Ask.
 - Highlight a couple of areas that match the offices or your own interests. For example,
 - Training next generation STEM workforce
 - Benefits to society and economy
 - Links to administration priorities such as AI, QIS, microelectronics
- We thank the congresspeople for the support we have been provided.

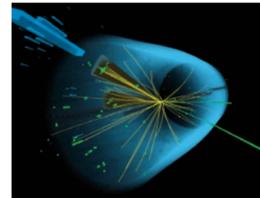




PARTICLE PHYSICS is Discovery Science

Exploring the Universe

The challenge of **particle physics** is to discover what our world is made of and how it works at the smallest scales. Particle physics explores the undiscovered universe from the tiniest particles to the outer reaches of space.



PARTICLE PHYSICISTS Value Diversity and Strive Toward Equity

Particle physicists understand the importance of having a diverse research community and fostering a sense of belonging among its current and future members. We are actively working to improve the climate for groups historically underrepresented in physics. These long needed changes to address systemic inequities are taking place throughout the community and wherever physicists work, including laboratory and university settings.



Community strategy to enable a diverse

"What drives significant intellectual progress and breakthrough is a diverse pool of talents who bring in distinctive skills and perspectives. Through our decadal planning process, the U.S. Particle Physics community ensure **equal access to education and career opportunities** for marginalized communities."



Building for Discovery

Strategic Plan for
U.S. Particle Physics
in the Global Context
usparticlephysics.org

The P5 Report provides the strategy and priorities for U.S. investments in particle physics for the coming decade.

The top three priorities in 2022

Strengthen support for particle physics research at universities and national laboratories, which includes data analysis, R&D, design of new experiments, and a vibrant theory program. As emphasized in the P5 Report, these activities are essential for the success of the field. They are crucial for extracting scientific knowledge from all the great new data, developing new methods and ideas, maintaining U.S. leadership, and training the next generation of scientists and innovators.

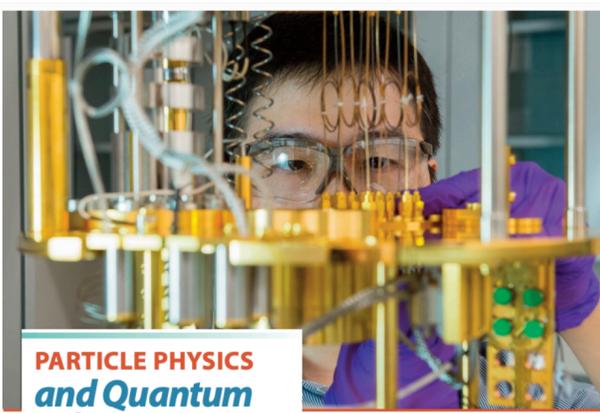
Advance the High-Luminosity Large Hadron Collider (HL-LHC) accelerator and ATLAS and CMS detector upgrade projects on schedule, continuing the highly successful LHC program and bilateral partnership with CERN.

Advance the Long-Baseline Neutrino Facility (LBNF), Deep Underground Neutrino Experiment (DUNE), and Proton Improvement Plan-II (PIP-II), working with international partners on the design, prototypes, initial site construction, and long-lead procurements.

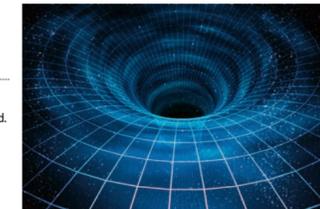
These carefully chosen investments will enable a steady stream of exciting new results for many years to come and will maintain U.S. leadership in key areas.



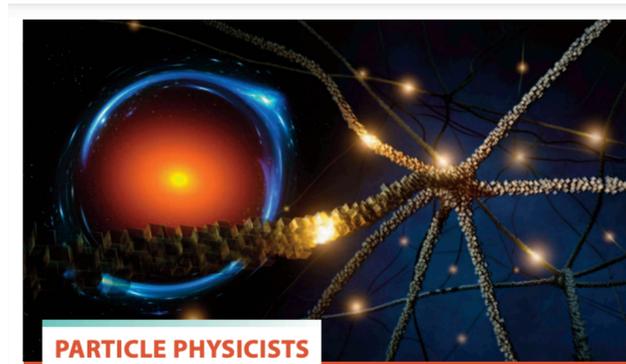
Particle physics is both global and local. Scientists, engineers, and technicians at more than 180 universities, institutes, and laboratories throughout the U.S. are working in partnership with their international colleagues to build high-tech tools and components, conduct scientific research, and train and educate the next generation of innovators. Valuing equity, diversity, and inclusion, the field is committed to increasing participation of underrepresented groups. Particle physics activities in the U.S. attract some of the best scientists from around the world.



PARTICLE PHYSICS and Quantum Information Science



Physics and Quantum Information Science are tightly connected. Quantum Information Science (QIS) is the nation's top priority for scientific competitiveness. This effort specific to QIS and the ability to build large-scale instruments. Connections to fundamental physics from the interactions of particles and the death of black holes.



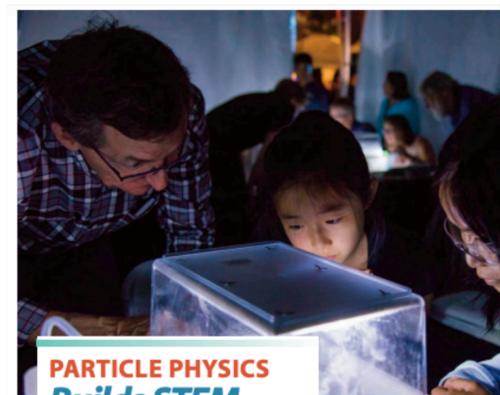
PARTICLE PHYSICISTS Advance Artificial Intelligence

Particle physicists advance artificial intelligence in their quest to explore the frontiers of science. They face unique challenges in operating complex accelerators and detectors and in analyzing massive streams of data. They meet these challenges with innovative techniques that have applications in other areas of science and in industry.



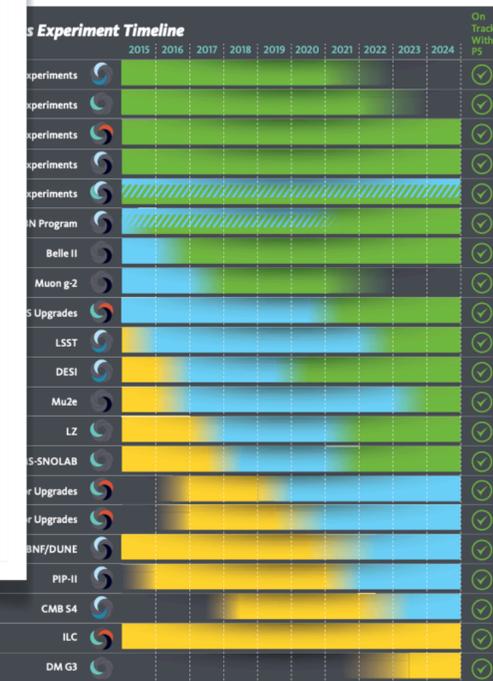
Particle Physicists Deliver Discovery Science Through Collaboration

Particle physicists seek to discover the fundamental laws of nature by making observations at the largest and smallest distances ever probed by humans. To meet this challenge, particle physicists from the U.S. and around the world join together in groups large and small. These collaborations have been incredibly successful at developing highly complex experiments and delivering world-leading scientific research.



PARTICLE PHYSICS Builds STEM Leaders

Particle physicists share the excitement of discovery, inspire young minds, and enhance public understanding of science. We partner with educators to prepare students to thrive in our high-tech global economy and develop the next generation of innovators.



The science drivers

- Use the Higgs Boson as a tool for discovery
- Pursue physics associated with neutrino mass
- Identify the new physics of dark matter
- Understand dark energy and inflation
- Explore the unknown

Legend:
● Operation & Analysis
● Fabrication/Construction
● Conceptual & Technical Design



PARTICLE PHYSICS Makes a Difference in Your Life

Global science, local impact
Particle physics is a global discovery science central to the modern innovation ecosystem. It drives national, regional, and local progress in science and industry. And it improves your quality of life.



- Hold multiple training sessions to teach people: how to talk to congress, the appropriations process, meeting etiquette, and the material.
- Provide talks from HEP government relations experts
- Well-developed [Trip wiki](#) with masses of info and material for the trip
- Provide training videos showing example meetings
- On-the-job training: meetings are held in pairs, with a lead and secondary. First, attendees attend meetings as secondary before running their own.



Gov relations expert talks to trip attendees at URA, 8am first day



Training video

Appropriations Committee meetings

- In addition, we meet specifically with the staff of the various congressional committees, including Appropriations committees, which are formatting the congressional budget for DOE and NSF
 - Approp: Commerce, Justice, Science (House and Senate)
 - Approp: Energy & Water Development (House and Senate)
 - Energy (House and Senate)
 - House Research and Tech, and Senate Space and Science

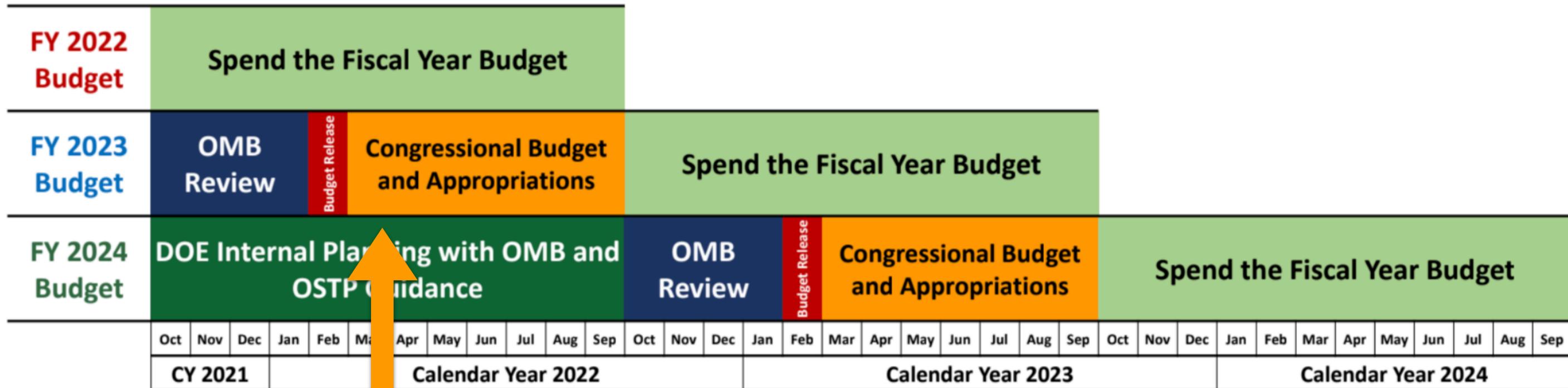
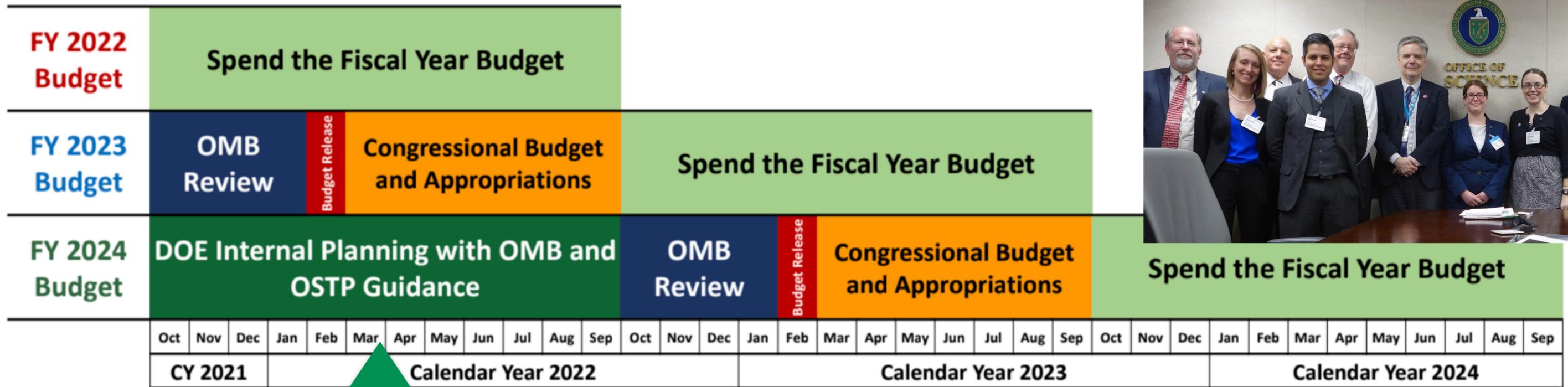


Image from Michal Cooke

DC trip

Executive branch meetings

- In addition to the congressional visits, we also arrange visits with:
 - Funding agencies: NSF, DOE OHEP, and DOE OS
 - Executive office of the President - Office of Management and Budget/Office of Science and Technology Policy
- These groups are already focused on next year's budget, but we can provide feedback on how their budget is being received in congress and give input on the next budget



↑
DC trip



Image from Michal Cooke

How we make it work

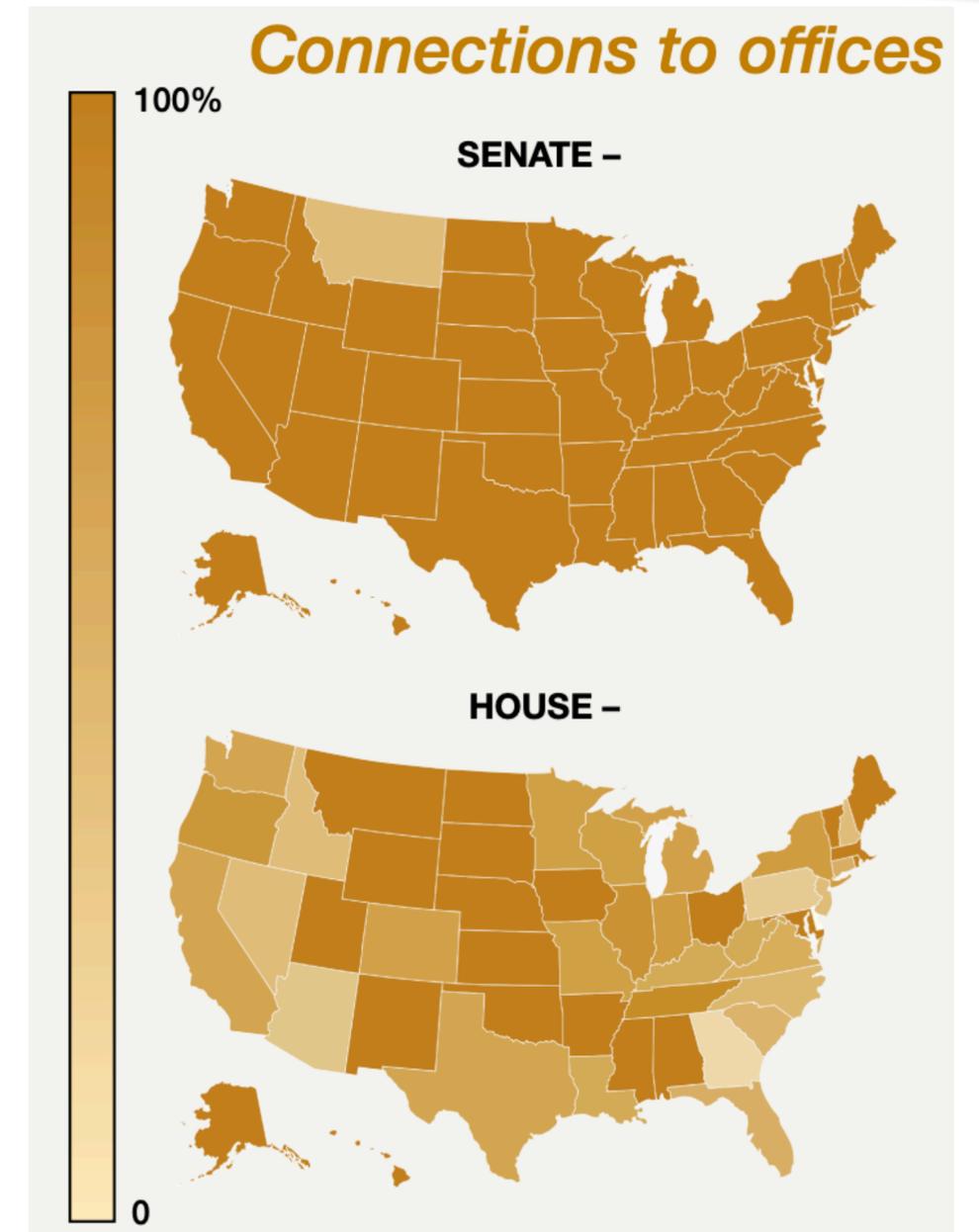
- Pre-trip attendees provide 'connections' to congressional districts.
- An algorithm matches attendees with Representatives and Senators
- Attendees are responsive to arranging meetings with matched offices
- Over 3723 connections are currently in the database - but not enough to reach all districts
- We need you!



Connection Type

Senate/House: House
State: Arizona
District: 6
Prev. Visits: 0

- Immediate Family
- Extended Family
- Current Resident
- Former Resident
- Registered Voter
- Current Workplace
- Former Workplace
- Educated in district/state
- Personal Connection
- None of the Above



HEP DC Trip Code of Conduct

Fermilab Users Executive Committee, SLAC Users Organization, US LHC Users Association

All trip attendees will conduct themselves in a professional manner that is welcoming to all participants and free from any form of discrimination, harassment, bullying, or retaliation. Participants will treat each other with respect and consideration to create a collegial, inclusive, and professional environment in all activities associated with the trip.

Participants will avoid any inappropriate actions or statements based on individual characteristics of any kind. Disruptive or harassing behavior of any kind will not be tolerated. Harassment includes but is not limited to inappropriate or intimidating behavior and language, unwelcome jokes or comments, unwanted touching or attention, and stalking.

The above considerations apply to both interactions with other participants and interactions with Congressional offices and their personnel. Participants agree to maintain civil, respectful, and appropriate discourse during all visits. As representatives of the High Energy Physics community, participants agree to abstain from making statements, or introducing materials and/or personal opinions--political or otherwise--which are unrelated to or in conflict with the message agreed upon by the community.

Violations of this code of conduct policy may be reported to any of the trip organizers. Sanctions may range from verbal warning, to ejection from the trip, to notifying appropriate authorities, at the discretion of the organizers. Retaliation for complaints of inappropriate conduct will not be tolerated. If a participant observes inappropriate comments or actions and personal intervention seems appropriate and safe, they should be considerate of all parties before intervening.

Sophisticated logistical and management tools have been developed



Louise Suter

Change Password

Edit Profile

contact

2022-march 13 2021-march 8 2020-march 18 2019-march 20 2018-march 16

Your Full Schedule

Yellow = you are the primary.

Search:

Type	Meeting	Time	Location	Primary	Secondary
Legislator	Daines, Steve R-MT ✓ Packet Phone meeting	2022 14:00	[Redacted]	Louise Suter	
Legislator	Pocan, Mark D-WI 2 ✓ Packet Phone meeting	2022 15:00	[Redacted]	Louise Suter	Kevin Black
Committee	Senate Energy and Water Development	2022 15:30	[Redacted]	--	[Multiple]
Legislator	Bustos, Cheri D-IL 17 ✓ Packet Phone meeting	2022 12:30	[Redacted]	Louise Suter	
Legislator	Good, Robert R-VA 5 ✓ Packet Phone meeting	2022 14:00	[Redacted]	Louise Suter	Andrew Norman
Legislator	Davis, Rodney R-IL 13 ✓ Packet Phone meeting	2022 14:30	[Redacted]	Louise Suter	
Legislator	Graves, Sam R-MO 6 ✓ Packet Phone meeting	2022 15:00	[Redacted]	Louise Suter	
Legislator	Underwood, Lauren D-IL 14 ✓ Packet	2022 14:00	[Redacted]	Louise Suter	

WHIPS Administrators



Justin Vasel justin.vasel@gmail.com
Fernanda Psihas fernanda.psihas@gmail.com

Detailed meeting planning and tracking

Including trip reports and info from past meetings

🔄 THIS IS A PHONE MEETING 🔄

MEETING #2559 2022-MARCH

Rep Lauren Underwood

D-IL 14

Congressional Office Meeting - House

[Edit meeting details](#)
✔ Packet Delivered! (undo)

ASSIGNED
CONTACT
SCHEDULE
FILE REPORT

Attendees

Primary
[Louise Suter](#) (UEC)

Secondary

Coordinates

Time
2022-04-12 14:00:00 EDT 📅

Phone Number (if any)

Meeting with

Name & email

Position

Real-time statistics on the trip

88 meetings are still unassigned. Claim them [here](#).

18 meetings are still uncontacted. Contact your assignments!

134 meetings are still unscheduled. We can do it!

SCHEDULING PROGRESS

Scheduled: 284
Contacted: 434
Unassigned: 88

Rejected: 34
Scheduled: 284

Contacted: 434
Assigned: 452

Unassigned: 88

PACKET DELIVERY PROGRESS

Packets Delivered: 303
Unassigned: 237

Packets Delivered: 303 / 540

Office by office details

Rep. Lauren Underwood

D-IL 14

UNITED STATES HOUSE OF REPRESENTATIVES (next election: 2022)

Website: <https://underwood.house.gov>

Phone: 202-225-2976

Office: 1130 Longworth House Office Building

Twitter: [@RepUnderwood](#)

GovTrack: <https://www.govtrack.us/congress/members/412776>

🕒 Past Meetings
3

Automatically generated tailored DOE and NSF grant info

Tailored to Representative/Senator

Information on interns



Louise Suter
 Fermilab Users Executive Committee
 Fermi National Accelerator Laboratory
 P.O. Box 500 - MS 220
 Batavia, IL 60510

The Honorable Lauren Underwood
 United States House of Representatives
 1130 Longworth House Office Building
 Washington, D.C. 20515

Dear Representative Underwood:

The DOE Office of Science and NSF Directorate for Mathematical and Physical Sciences (MPS) directly support scientists, engineers, and students in all 50 States, the District of Columbia, and Puerto Rico through research grants to academic institutions and contracts to supporting industries. In fiscal year 2021, the Department of Energy (DOE) Office of Science had a budget of \$1.046 billion for High Energy Physics (HEP), and the National Science Foundation (NSF) had a budget of \$8.487 billion.



Illinois

- Northwestern University
- University of Chicago
- Northern Illinois University
- Illinois Institute of Technology
- University of Illinois

Institutions receiving DOE HEP grants during FY2021

Please find below specific information about grants and contracts that were awarded by the DOE Office of Science and NSF to institutions and businesses in your district during FY2021 and preceding years.

Illinois's 14th Congressional District

In the past 6 years, this district has been awarded:

- DOE Office of Science contracts totaling: **\$3,585,113,189**
Contracts with companies in your district, primarily related to the operation of DOE National Laboratories
- NSF MPS research grants totaling: **\$5,000**
Grants to researchers in your district from the NSF Directorate for Mathematical and Physical Sciences

SULI & CCI Students

Science Undergraduate Laboratory Internships, Community College Internships

Name	College	Host Lab
Michael Christofersen	Waubonsee Community College	Fermi National Accelerator Laboratory
Christian Darvin Ornelas	Waubonsee Community College	Fermi National Accelerator Laboratory
Christopher Settles	Waubonsee Community College	Fermi National Accelerator Laboratory
Ramone Aries Randle	Waubonsee Community College	Fermi National Accelerator Laboratory
Emmanuel Noufele	Waubonsee Community College	Fermi National Accelerator Laboratory
Thomas Mcdonald	Waubonsee Community College	Fermi National Accelerator Laboratory
Emily Macuk	McHenry County College	Fermi National Accelerator Laboratory

Trip attendee specific logo and contact details

Tailored to district or state

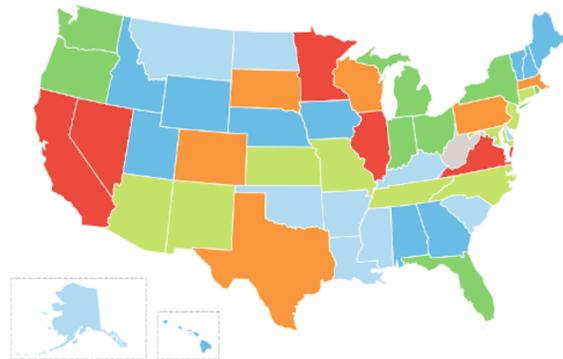
Developers:
 Rob Fine
 Michael Baumer
 Matthew Feickert
 Justin Vasel
 Fernanda Psihas



The Honorable Lauren Underwood
 United States House of Representatives
 1130 Longworth House Office Building
 Washington, D.C. 20515

Dear Representative Underwood:

In fiscal year 2021, Fermilab spent \$330 million in the United States to purchase goods and services in 48 states and the District of Columbia. Please find below specific information about goods and services purchased by Fermilab from your State or district during this time.



\$1,000–\$100,000	\$100,000–\$1 million
Alaska, Arkansas, Delaware, Kentucky, Louisiana, Mississippi, Montana, North Dakota, Oklahoma, South Carolina	Alabama, Georgia, Hawaii, Idaho, Iowa, Maine, Nebraska, New Hampshire, Utah, Vermont, Wyoming
\$1 million–\$2 million	\$2 million–\$4 million
Arizona, Connecticut, Kansas, Maryland, Missouri, New Jersey, New Mexico, North Carolina, Tennessee	Florida, Indiana, Michigan, New York, Ohio, Oregon, Rhode Island, Washington
\$4 million–\$10 million	More than \$10 million
Colorado, District of Columbia, Massachusetts, Pennsylvania, South Dakota, Texas, Wisconsin	California, Illinois, Minnesota, Nevada, Virginia

Louise Suter

Fermilab Users Executive Committee
 Fermi National Accelerator Laboratory
 P.O. Box 500 - MS 220
 Batavia, IL 60510

March 20, 2022

Information on HEP spending, using FNAL spreading per district.

Pulled from annual Fermilab procurements

Illinois's 14th Congressional District

Vendor	ZIP Code	Amount (\$)
LEYDEN ELECTRIC INC	60119	\$838,891
VOLT ELECTRIC INC	60511	\$407,183
DILIGENTIA, LLC	60510	\$207,712
FEECE OIL CO	60510	\$169,470
FEHR SOLUTIONS LLC	60134	\$144,115
DEKANE EQUIPMENT CORP	60511	\$93,328
DIVERSIFIED FLEET SERVICES	60510	\$87,940
POWER ONE SUPPLY INC	60134	\$81,587
NICOR GAS	60507	\$79,753
WELDSTAR COMPANY	60507	\$66,226
SCHAEFER GREENHOUSES	60507	\$58,340
PRODUCERS CHEMICAL CO	60554	\$45,694
ADAMS, MARK	60134	\$40,000
CARGILL SALT INC	60585	\$39,803
ADVANCED DISPOSAL SERVICES SOLID WASTE MIDWEST LLC	60510	\$38,009
MARINE BIOCHEMISTS	60119	\$35,280

Developers:
 Rob Fine
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 Fernanda Psihas

Getting involved

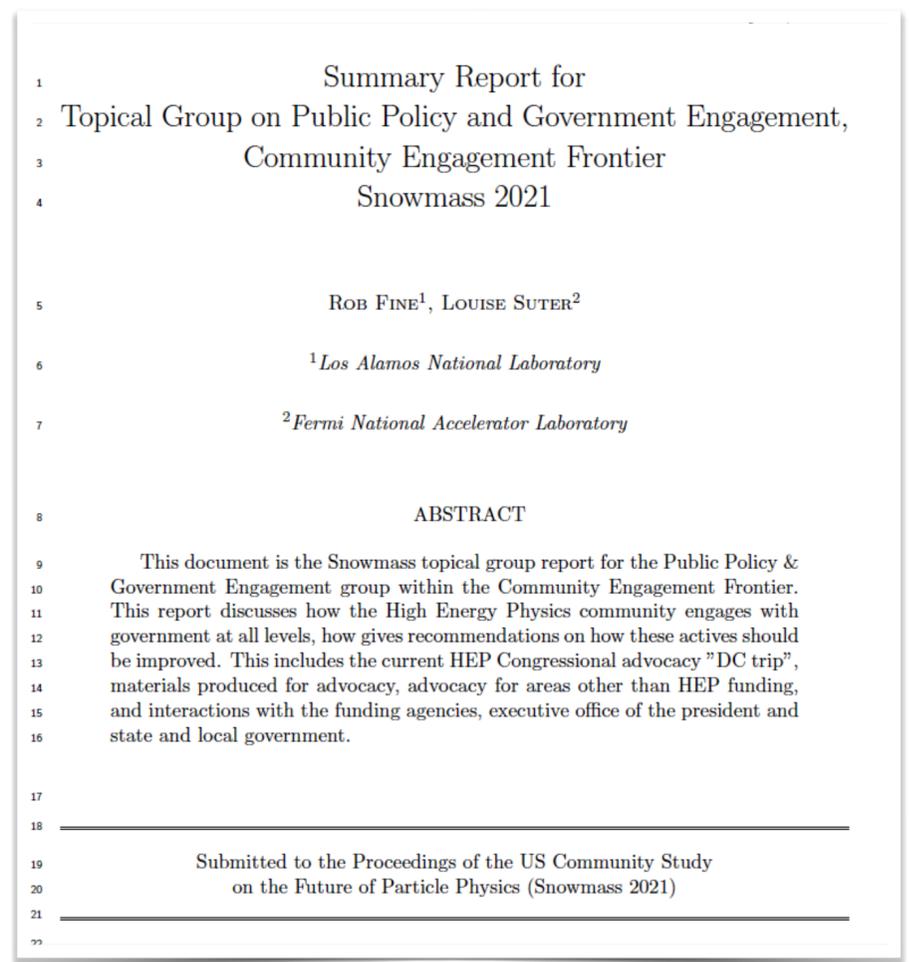
Google form to express your interest <https://forms.gle/vpjtKZnBRmUSjvGJ8>

- **A small number of people manage the logistical tools. Please let us know if you want to help!**
- **Lots of improvements are planned but need more resources to see them actualized.**
- **We need your new ideas!**
- **People to come on a virtual or in-person trip.**

CEF06 Recommendation 2 – The FNAL, SLAC, USLHC Users groups and APS DPF must support and grow the annual HEP Congressional advocacy effort.

The annual HEP advocacy effort is essential to increasing knowledge and interest of HEP in Congress. Participation in these efforts should be encouraged. The HEP community should support efforts for continued development and growth.

Sub-recommendations 2.1 - 2.6 are listed in Section 5 and give specific recommendations in this area.



CEF06: PP&GE report and feedback sheet from the wiki <https://snowmass21.org/community/policy>

CEF06: PP&GE contributed papers

Submitted to the Proceedings of the US Community Study
on the Future of Particle Physics (Snowmass 2021)

Snowmass '21 Community Engagement Frontier 6: Public Policy and Government Engagement Congressional Advocacy for HEP Funding (The "DC Trip")

Mateus Carneiro¹, Richie Diurba², Rob Fine³, Mandeep Gill⁴, Ketino Kaadze⁵, Harvey Newman⁶,
Kevin Pedro⁷, Alexx Perloff⁸, Louise Suter⁷, and Shawn Westerdale⁹

¹Brookhaven National Laboratory
²Universität Bern
³Los Alamos National Laboratory
⁴Kavli Institute
⁵Kansas State University
⁶California Institute of Technology
⁷Fermi National Accelerator Laboratory
⁸University of Colorado Boulder
⁹Princeton University

physics.soc-ph] 11 Jul 2022

Submitted to the Proceedings of the US Community Study
on the Future of Particle Physics (Snowmass 2021)

Snowmass '21 Community Engagement Frontier 6: Public Policy and Government Engagement Congressional Advocacy for Areas Beyond HEP Funding

Richie Diurba¹, Rob Fine², Mandeep Gill³, Harvey Newman⁴, Kevin Pedro⁵, Alexx Perloff⁶, Breese
Quinn⁷, Louise Suter⁵, and Shawn Westerdale⁸

¹Universität Bern
²Los Alamos National Laboratory
³Kavli Institute
⁴California Institute of Technology
⁵Fermi National Accelerator Laboratory
⁶University of Colorado Boulder
⁷University of Mississippi
⁸Princeton University

physics.soc-ph] 12 Jul 2022

Submitted to the Proceedings of the US Community Study
on the Future of Particle Physics (Snowmass 2021)

Snowmass '21 Community Engagement Frontier 6: Public Policy and Government Engagement Non-Congressional Government Engagement

Richie Diurba¹, Rob Fine², Mandeep Gill³, Harvey Newman⁴, Kevin Pedro⁵, Alexx Perloff⁶, and
Louise Suter⁵

¹Universität Bern
²Los Alamos National Laboratory
³Kavli Institute
⁴California Institute of Technology
⁵Fermi National Accelerator Laboratory
⁶University of Colorado Boulder

soc-ph] 12 Jul 2022

- Non-Congressional Government Engagement
<https://arxiv.org/pdf/2207.00125.pdf>
- Advocacy for Areas Beyond HEP Funding
<https://arxiv.org/pdf/2207.00124.pdf>
- Congressional Advocacy for HEP Funding
<https://arxiv.org/pdf/2207.00122.pdf>

Backup

Organizers

- Adam Lyon (UEC, 2023 lead)
- Nadja Strobber (UEC, 2022 lead)
- Keti Kaadze (UEC, 2021 lead)
- Harvey Newman, Kevin Black (USLUA)
- Mandeep Gill (SLUO)

Logistics

- Fernanda Psihas,
- Rob Fine,
- Justin Vasel (UEC)

Meeting planning

- Breese Quinn (Congressional committees)
- Harvey Newman (Executive offices)

Developing material - Michael Cooke (DOE) and some key members of HEP community (usparticlephysics.org)

The P5 report was well received within congress

- 2014 House Energy & Water Approp.: “**Committee supports the Office of Science’s challenge to the HEP community** to identify an LBNE construction approach that avoids large out-year funding spikes or to identify viable alternatives with similar scientific benefits at significantly lower cost.”
- 2015 House Energy & Water Approp.: “Committee notes that the HEP research community is currently engaged in developing a ten-year plan for U.S. particle physics, which will include a ten-year report by the **Particle Physics Project Prioritization Panel** under various budget scenarios. **The Committee applauds the Department for this undertaking . . .**”
- 2016 House Energy & Water Approp.: “Committee **strongly supports** the Department’s efforts to advance the recommendations of the **Particle Physics Prioritization Panel** and urges the Department to maintain a careful balance among competing priorities and among small, medium, and large scale projects.”